



## SEQUENCE LISTING

<110> GREENSTEIN, DAVID  
MILLER, MICHAEL A.

<120> COMPOSITIONS AND METHODS OF NEMATODE CONTROL

<130> N-7088

<140> 09/863,063

<141> 2001-05-21

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<151> 2000-05-19

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<151> 2001-03-08

<160> 33

<170> PatentIn Ver. 2.1

<210> 1

<211> 126

<212> PRT

<213> *Caenorhabditis elegans*

<400> 1

Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys  
1 5 10 15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys  
20 25 30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr  
35 40 45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro  
50 55 60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly  
65 70 75 80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr  
85 90 95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp  
100 105 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
115 120 125

<210> 2

<211> 126

<212> PRT

<213> *Caenorhabditis elegans*

&lt;400&gt; 2

Ala	Gln	Ser	Val	Pro	Pro	Gly	Asp	Ile	Gln	Thr	Gln	Pro	Gly	Thr	Lys
1				5					10					15	
Ile	Val	Phe	Asn	Ala	Pro	Tyr	Asp	Asp	Lys	His	Thr	Tyr	His	Ile	Lys
		20					25						30		
Val	Ile	Asn	Ser	Ser	Ala	Arg	Arg	Ile	Gly	Tyr	Gly	Ile	Lys	Thr	Thr
		35					40					45			
Asn	Met	Lys	Arg	Leu	Gly	Val	Asp	Pro	Pro	Cys	Gly	Val	Leu	Asp	Pro
	50					55					60				
Lys	Glu	Ala	Val	Leu	Leu	Ala	Val	Ser	Cys	Asp	Ala	Phe	Ala	Phe	Gly
65				70						75					80
Gln	Glu	Asp	Thr	Asn	Asn	Asp	Arg	Ile	Thr	Val	Glu	Trp	Thr	Asn	Thr
				85					90					95	
Pro	Asp	Gly	Ala	Ala	Arg	Gln	Phe	Arg	Arg	Glu	Trp	Phe	Gln	Gly	Asp
			100					105					110		
Gly	Met	Val	Arg	Arg	Lys	Asn	Leu	Pro	Ile	Glu	Tyr	Asn	Pro		
		115					120					125			

&lt;210&gt; 3

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Caenorhabditis elegans

&lt;400&gt; 3

Ala	Gln	Ser	Val	Pro	Pro	Gly	Asp	Ile	Gln	Thr	Gln	Pro	Asn	Ala	Lys
1				5					10					15	
Ile	Val	Phe	Asn	Ala	Pro	Tyr	Asp	Asp	Lys	His	Thr	Tyr	His	Ile	Lys
		20					25						30		
Val	Ile	Asn	Ser	Ser	Ala	Arg	Arg	Ile	Gly	Tyr	Gly	Ile	Lys	Thr	Thr
		35					40					45			
Asn	Met	Lys	Arg	Leu	Gly	Val	Asp	Pro	Pro	Cys	Gly	Val	Leu	Asp	Pro
	50					55					60				
Lys	Glu	Ala	Val	Leu	Leu	Ala	Val	Ser	Cys	Asp	Ala	Phe	Ala	Phe	Gly
65				70						75					80
Gln	Glu	Asp	Thr	Asn	Asn	Asp	Arg	Ile	Thr	Val	Glu	Trp	Thr	Asn	Thr
				85					90					95	
Pro	Asp	Gly	Ala	Ala	Lys	Gln	Phe	Arg	Arg	Glu	Trp	Phe	Gln	Gly	Asp
			100					105					110		
Gly	Met	Val	Arg	Arg	Lys	Asn	Leu	Pro	Ile	Glu	Tyr	Asn	Pro		
		115					120					125			

<210> 4  
 <211> 126  
 <212> PRT  
 <213> *Caenorhabditis elegans*

<400> 4  
 Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Asn Ala Lys  
   1                  5                  10                  15  
 Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys  
                   20                  25                  30  
 Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr  
                   35                  40                  45  
 Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro  
   50                  55                  60  
 Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly  
   65                  70                  75                  80  
 Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr  
                   85                  90                  95  
 Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp  
                   100                  105                  110  
 Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
   115                  120                  125

<210> 5  
 <211> 126  
 <212> PRT  
 <213> *Caenorhabditis elegans*

<400> 5  
 Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys  
   1                  5                  10                  15  
 Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Asp His Ile Lys  
                   20                  25                  30  
 Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr  
                   35                  40                  45  
 Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Phe Asp Pro  
   50                  55                  60  
 Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly  
   65                  70                  75                  80  
 Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr  
                   85                  90                  95  
 Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp  
                   100                  105                  110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
 115 120 125

<210> 6  
 <211> 126  
 <212> PRT  
 <213> *Caenorhabditis elegans*

<400> 6  
 Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys  
 1 5 10 15  
 Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys  
 20 25 30  
 Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Ile  
 35 40 45  
 Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro  
 50 55 60  
 Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly  
 65 70 75 80  
 Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr  
 85 90 95  
 Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp  
 100 105 110  
 Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
 115 120 125

<210> 7  
 <211> 126  
 <212> PRT  
 <213> *Caenorhabditis elegans*

<400> 7  
 Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys  
 1 5 10 15  
 Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys  
 20 25 30  
 Val Ile Asn Ser Ser Ala Arg Arg Ile Val Tyr Gly Ile Lys Thr Thr  
 35 40 45  
 Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro  
 50 55 60  
 Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly  
 65 70 75 80  
 Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr  
 85 90 95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp  
                   100                  105                  110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
           115                  120                  125

<210> 8

<211> 126

<212> PRT

<213> Caenorhabditis elegans

<400> 8

Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys  
   1                  5                  10                  15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr Arg Ile Lys  
                   20                  25                  30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr  
           35                  40                  45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro  
       50                  55                  60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly  
       65                  70                  75                  80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr  
                   85                  90                  95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp  
                   100                  105                  110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
           115                  120                  125

<210> 9

<211> 126

<212> PRT

<213> Caenorhabditis elegans

<400> 9

Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys  
   1                  5                  10                  15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys  
           20                  25                  30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr  
           35                  40                  45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro  
       50                  55                  60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly  
65 70 75 80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn Thr  
85 90 95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp  
100 105 110

Gly Met Ala Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
115 120 125

<210> 10

<211> 126

<212> PRT

<213> *Caenorhabditis elegans*

<400> 10

Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr Lys  
1 5 10 15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys  
20 25 30

Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr Thr  
35 40 45

Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro  
50 55 60

Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe Gly  
65 70 75 80

Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn Thr  
85 90 95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp  
100 105 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
115 120 125

<210> 11

<211> 126

<212> PRT

<213> *Ascaris suum*

<400> 11

Ala Gln Ser Val Pro Pro Gly Asp Ile Asn Thr Gln Pro Ser Gln Lys  
1 5 10 15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys  
20 25 30

Ile Thr Asn Ala Gly Gly Arg Arg Ile Gly Trp Ala Ile Lys Thr Thr  
35 40 45

Asn Met Arg Arg Leu Ser Val Asp Pro Pro Cys Gly Val Leu Asp Pro  
50 55 60

Lys Glu Lys Val Leu Met Ala Val Ser Cys Asp Thr Phe Asn Ala Ala  
65 70 75 80

Thr Glu Asp Leu Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn Thr  
85 90 95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp  
100 105 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Leu  
115 120 125

<210> 12

<211> 126

<212> PRT

<213> Ascaris suum

<400> 12

Ala Gln Ser Val Pro Pro Gly Asp Ile Asn Thr Gln Pro Gly Ser Lys  
1 5 10 15

Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile Lys  
20 25 30

Ile Thr Asn Ala Gly Gly Arg Arg Ile Gly Trp Ala Ile Lys Thr Thr  
35 40 45

Asn Met Arg Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp Pro  
50 55 60

Lys Glu Ser Val Leu Met Ala Val Ser Cys Asp Thr Phe Asn Ala Ala  
65 70 75 80

Thr Glu Asp Leu Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn Thr  
85 90 95

Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly Asp  
100 105 110

Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Leu  
115 120 125

<210> 13

<211> 21

<212> PRT

<213> Ascaris suum

<220>

<223> MSP-alpha

<400> 13

Arg Glu Trp Phe Gln Gly Asp Gly Met Val Arg Arg Lys Asn Leu Pro  
 1 5 10 15

Ile Glu Tyr Asn Leu  
 20

<210> 14  
 <211> 21  
 <212> PRT  
 <213> Ascaris suum

<220>  
 <223> MSP-beta

<400> 14  
 Arg Glu Trp Phe Gln Gly Asp Gly Met Val Arg Arg Lys Asn Leu Pro  
 1 5 10 15

Ile Glu Tyr Asn Leu  
 20

<210> 15  
 <211> 21  
 <212> PRT  
 <213> Globodera rostochiensis

<220>  
 <223> MSP1

<400> 15  
 Leu Glu Trp Phe Gln Gly Asp Gly Met Val Arg Arg Lys Asn Leu Pro  
 1 5 10 15

Ile Glu Tyr Asn Val  
 20

<210> 16  
 <211> 21  
 <212> PRT  
 <213> Globodera rostochiensis

<220>  
 <223> MSP2

<400> 16  
 Leu Glu Trp Phe Gln Gly Asp Gly Met Val Arg Arg Lys Asn Leu Pro  
 1 5 10 15

Ile Glu Tyr Asn Val  
 20

<210> 17  
 <211> 21



<212> PRT  
 <213> Globodera rostochiensis

<220>  
 <223> MSP3

<400> 17  
 Arg Glu Trp Phe Gln Gly Asp Gly Met Ala Arg Arg Lys Asn Leu Pro  
   1                  5                  10                  15

Ile Glu Tyr Asn Pro  
                   20

<210> 18  
 <211> 21  
 <212> PRT  
 <213> Caenorhabditis elegans

<220>  
 <223> MSP142

<400> 18  
 Arg Glu Trp Phe Gln Gly Asp Gly Met Ala Arg Arg Lys Asn Leu Pro  
   1                  5                  10                  15

Ile Glu Tyr Asn Pro  
                   20

<210> 19  
 <211> 21  
 <212> PRT  
 <213> Caenorhabditis elegans

<220>  
 <223> MSP33

<400> 19  
 Arg Glu Trp Phe Gln Gly Asp Gly Met Ala Arg Arg Lys Asn Leu Pro  
   1                  5                  10                  15

Ile Glu Tyr Asn Leu  
                   20

<210> 20  
 <211> 21  
 <212> PRT  
 <213> Onchocerca volvulus

<220>  
 <223> MSP1

<400> 20  
 Arg Glu Trp Phe Gln Gly Asp Gly Met Ala Arg Arg Lys Asn Leu Pro  
   1                  5                  10                  15

Ile Glu Tyr Asn Leu  
20

<210> 21  
<211> 127  
<212> PRT  
<213> Onchocerca volvulus

<220>  
<223> MSP2

<400> 21  
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr  
1 5 10 15  
Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile  
20 25 30  
Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr  
35 40 45  
Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp  
50 55 60  
Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
65 70 75 80  
Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn  
85 90 95  
Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly  
100 105 110  
Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
115 120 125

<210> 22  
<211> 127  
<212> PRT  
<213> Caenorhabditis elegans

<400> 22  
Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr  
1 5 10 15  
Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile  
20 25 30  
Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr  
35 40 45  
Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp  
50 55 60  
Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
65 70 75 80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn  
85 90 95

Thr Pro Asp Gly Ala Ala Arg Gln Phe Arg Arg Glu Trp Phe Gln Gly  
100 105 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
115 120 125

<210> 23

<211> 127

<212> PRT

<213> Caenorhabditis elegans

<400> 23

Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Asn Ala  
1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile  
20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr  
35 40 45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp  
50 55 60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
65 70 75 80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn  
85 90 95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly  
100 105 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
115 120 125

<210> 24

<211> 127

<212> PRT

<213> Caenorhabditis elegans

<400> 24

Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Asn Ala  
1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile  
20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr  
35 40 45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp  
 50 55 60  
 Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
 65 70 75 80  
 Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn  
 85 90 95  
 Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly  
 100 105 110  
 Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
 115 120 125

<210> 25  
 <211> 127  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 25  
 Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr  
 1 5 10 15  
 Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Asp His Ile  
 20 25 30  
 Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr  
 35 40 45  
 Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Phe Asp  
 50 55 60  
 Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
 65 70 75 80  
 Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn  
 85 90 95  
 Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly  
 100 105 110  
 Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
 115 120 125

<210> 26  
 <211> 127  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 26  
 Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr  
 1 5 10 15  
 Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile  
 20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr  
           35                          40                          45

Ile Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp  
           50                          55                          60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
           65                          70                          75                          80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn  
                           85                          90                          95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly  
                           100                          105                          110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
           115                          120                          125

<210> 27

<211> 127

<212> PRT

<213> Caenorhabditis elegans

<400> 27

Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr  
           1                          5                          10                          15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile  
                           20                          25                          30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Val Tyr Gly Ile Lys Thr  
           35                          40                          45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp  
           50                          55                          60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
           65                          70                          75                          80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn  
                           85                          90                          95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly  
                           100                          105                          110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
           115                          120                          125

<210> 28

<211> 127

<212> PRT

<213> Caenorhabditis elegans

&lt;400&gt; 28

Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr  
 1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr Arg Ile  
 20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr  
 35 40 45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp  
 50 55 60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
 65 70 75 80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn  
 85 90 95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly  
 100 105 110

Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
 115 120 125

&lt;210&gt; 29

&lt;211&gt; 127

&lt;212&gt; PRT

&lt;213&gt; Caenorhabditis elegans

&lt;400&gt; 29

Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr  
 1 5 10 15

Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile  
 20 25 30

Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr  
 35 40 45

Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp  
 50 55 60

Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
 65 70 75 80

Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn  
 85 90 95

Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly  
 100 105 110

Asp Gly Met Ala Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
 115 120 125

<210> 30  
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 <212> PRT  
 <213> Caenorhabditis elegans

<400> 30  
 Met Ala Gln Ser Val Pro Pro Gly Asp Ile Gln Thr Gln Pro Gly Thr  
   1                  5                  10                  15  
 Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile  
                   20                  25                  30  
 Lys Val Ile Asn Ser Ser Ala Arg Arg Ile Gly Tyr Gly Ile Lys Thr  
                   35                  40                  45  
 Thr Asn Met Lys Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp  
   50                  55                  60  
 Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
   65                  70                  75                  80  
 Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn  
                   85                  90                  95  
 Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly  
                  100                 105                 110  
 Asp Gly Met Val Arg Arg Lys Asn Leu Pro Ile Glu Tyr Asn Pro  
                  115                 120                 125

<210> 31  
 <211> 127  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 31  
 Met Ala Gln Ser Val Pro Pro Gly Asp Ile Asn Thr Gln Pro Ser Gln  
   1                  5                  10                  15  
 Lys Ile Val Phe Asn Ala Pro Tyr Asp Asp Lys His Thr Tyr His Ile  
                   20                  25                  30  
 Lys Ile Thr Asn Ala Gly Gly Arg Arg Ile Gly Trp Ala Ile Lys Thr  
                   35                  40                  45  
 Thr Asn Met Arg Arg Leu Ser Val Asp Pro Pro Cys Gly Val Leu Asp  
   50                  55                  60  
 Pro Lys Glu Lys Val Leu Met Ala Val Ser Cys Asp Thr Phe Asn Ala  
   65                  70                  75                  80  
 Ala Thr Glu Asp Leu Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn  
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 Thr Pro Asp Gly Ala Ala Lys Gln Phe Arg Arg Glu Trp Phe Gln Gly  
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 Thr Asn Met Arg Arg Leu Gly Val Asp Pro Pro Cys Gly Val Leu Asp  
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 Pro Lys Glu Ser Val Leu Met Ala Val Ser Cys Asp Thr Phe Asn Ala  
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 Ala Thr Glu Asp Leu Asn Asn Asp Arg Ile Thr Ile Glu Trp Thr Asn  
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 Pro Lys Glu Ala Val Leu Leu Ala Val Ser Cys Asp Ala Phe Ala Phe  
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 Gly Gln Glu Asp Thr Asn Asn Asp Arg Ile Thr Val Glu Trp Thr Asn  
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Thr	Pro	Asp	Gly	Ala	Ala	Lys	Gln	Phe	Arg	Arg	Glu	Trp	Phe	Gln	Gly
			100					105					110		
Asp	Gly	Met	Val	Arg	Arg	Lys	Asn	Leu	Pro	Ile	Glu	Tyr	Asn	Pro	
		115					120					125			